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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/575,029	12/15/2006	Younes Jalali	103.0010US/PCT	5945
50/258 7590 09/25/2008 SCHLUMBERGER TECHNOLOGY CORPORATION 14910 AIRLINE ROAD ROSHARON, TX 77583				
EXAMINER FITZGERALD, JOHN P				
ART UNIT 2856		PAPER NUMBER		
MAIL DATE 09/25/2008		DELIVERY MODE PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/575,029

**Applicant(s)**

JALALI ET AL.

**Examiner**

JOHN FITZGERALD

**Art Unit**

2856

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-7 and 9-12 is/are allowed.
- 6) ☒ Claim(s) 8, 13-32 and 34 is/are rejected.
- 7) ☒ Claim(s) 33 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 April 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-8508)
- Paper No(s)/Mail Date 2/29/08
- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date: \_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_

**DETAILED ACTION**

***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 8, 18-26 and 31 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Namely, the limitation of “multi-segment well model” or “grid” scheme/size are not adequately supported in the instant specification, thus failing to enable one of ordinary skill in the art to make and/or use the invention. The instant specification is silent regarding the term “multi-segment,” only appearing in the “Brief Description of the Drawings” under Fig. 14, stating: “Fig. 14 is a schematic representation of a deviated well divided into a multi-segment grid system for modeling.” While the instant specification later refers to instant Fig. 14, it does not employ the term “multi-segment,” and the instant specification fails to adequately define or explain what exactly constitutes a “multi-segment” well model. In specific regards to the term “grid,” in the instant specification fails to disclose the discretization of the equations employed thus providing a system to solve the equations via some mathematical/numerical method.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

4. Claims 27-29 and 32 are rejected under 35 U.S.C. 102(a) as being anticipated by US 2004/0112596 A1 to Williams et al. Williams et al. disclose a system (see Figs. 1-11) including a distributed (as recited in claim 28) temperature sensor (36) deployed in a deviated (generally horizontal, as recited in claim 32) wellbore of an injection well (Williams et al.: para. 0045) to obtain temperature data along the wellbore; and a processor system (42) able to receive the temperature data and utilize the data in deriving a flow profile of a fluid injected along the deviated/horizontal wellbore (see Abstract and para. 0021) (as recited in claim 27); as well as employing temperature data during injection of the fluid (as recited in claim 29).
5. Claims 13-18 and 27-30, 32 and 34 are rejected under 35 U.S.C. 102(a) as being anticipated by SPE 84379 to Brown et al. Brown et al. disclose a system (see Figs. 1-10) and a method of determining characteristics of a well including a fiber-optic distributed (as recited in claims 15 and 28) temperature sensor (see Fig. 1) deployed in a deviated (generally horizontal, as recited in claim 32) wellbore of an injection well, wherein a liquid is injected (Brown et al.: abstract) to obtain temperature data along the wellbore; and a processor system (Brown et al.: page 2, col. 1, second para.) able to receive the temperature data and utilize the data in deriving a flow profile of a fluid injected along the deviated/horizontal wellbore (Brown et al: (page 3, col. 1, third para., and col. 2, second para.) (as recited in claims 13 and 27); as well as employing

temperature data during injection of the fluid (as recited in claim 29); shutting the well and utilizing data during a shut-in period (stoppage of injection so a temperature contrast develops between the liquid and the wellbore) (as recited in claim 16) of one to two days (as recited in claim 14)(Brown et al.: page 2, col. 1, para. 5) (as recited in claim 30); and wherein the processing system is able to receive and process reservoir permeability data deriving the flow profile (Brown et al.: page 2, col. 1, paras. 5-7) (as recited in claim 34); wherein the process of injection and shutting in is repeated (as recited in claim 17).

***Allowable Subject Matter***

6. Claims 1-7 and 9-12 are allowed over the Prior Art of record.
7. Claim 33 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Applicant is invited to review PTO form 892 accompanying this Office Action listing Prior Art relevant to the instant invention cited by the Examiner.
9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Fitzgerald whose telephone number is (571) 272-2843. The examiner can normally be reached on Monday-Friday from 7:00 AM to 3:30 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron Williams,

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can be reached on (571) 272-2208. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/John Fitzgerald/  
Examiner, Art Unit 2856  
9/22/08